

Bird records from the Isunkaviola Hills of Ruaha National Park, Tanzania

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Ruaha National Park, situated in the mid-south of Tanzania (07°S, 34°E), covers an area of 10 300 km² and, together with the unpopulated game reserves surrounding the park, forms a contiguous ecosystem of some 45 000 km². The altitude is generally low, at between 750–1500 m, but the Isunkaviola Hills (07°45'S, 34°02'E) in the extreme western corner of the park reach an altitude of 1868 m. These hills are remnants of an ancient plateau sloping west and south from their north and northeast facing escarpment.

Vegetation in the park ranges from open grassland to mixed *Combretum* woodland and *Terminalia* woodland, areas of *Acacia* and larger tracts of *Brachystegia* woodland. The Isunkaviola Hills hold two areas of *Drypetes* climax forest, the largest of which is approximately 2.5 km² situated on high ridges, and an area of riverine forest in the Kilola Valley. These are the only such remnants in Ruaha Park. All gullies in the area hold *Drypetes* amongst other species, and most have small perennial streams along their courses. The riverine forest of the Kilola Valley (1730 m) is approximately 4 km long and 100 m wide. Several adjoining fingers of forest follow valleys or gullies that join the central Kilola. All have streams and several springs and marshes that help to feed the Kilola system. Both the Kilola riverine forested valley and the area of *Drypetes* forest are surrounded by *Brachystegia* woodland.

Until the present time the only studies carried out in the area were by Andres Bjornstadt between 1973 and 1976, when he made a comprehensive list of plants in Ruaha Park (reference unavailable). After several reconnaissance flights in October 1994, November 2000, February 2003, and December 2003, during which observations and GPS readings were made, it became clear that the geographical location of the Isunkaviola Hills, together with the isolated nature of the two substantial areas of mature *Drypetes* forest and one area of riverine forest, were likely to provide some interesting findings.

One reconnaissance flight in November 2000 revealed that the only area of equivalent forest type close to, though outside of, the park is on the Kigome Hills at 1890 m some 20 km away and separated by the Mzombe River valley. Whilst this locality does have some *Drypetes* forest, it is very

broken and interspersed with large areas of rock. The only riverine forested section, similar to the Kilola Valley, is in an extremely deep gorge with difficult access.

To date, 529 species of birds have been recorded in Ruaha National Park (R. Glen pers. obs.). Observations from 2001–2004 in the Isunkaviola Hills suggest that the birds in this particular part of the park have affinities both to the eastern Congo and the Eastern Arc Mountains such as Black-backed Barbet *Lybius minor* and Eastern Olive Sunbird *Cyanomitra olivacea*. These indicate possible relict connections with areas such as the Chunya-Mbeya highlands to the south and the Kigome Hills to the northwest, which until now have been neglected.

Methods

Two expeditions to the Isunkaviola Hills, in October 2001 and November 2002, gained access to the *Drypetes* forest. However, due to the difficult terrain, the Kilola Valley remained out of reach. A third expedition, in October 2003, gained access to the central *Drypetes* section (07°45'S, 34°02'E) and finally into the Kilola riverine forest where one day was spent undertaking a brief reconnaissance. During the three previous expeditions to the Isunkaviola Hills, access was permitted by vehicle to facilitate coverage of a larger area with our necessary equipment in a short space of time. The fourth expedition, in 2004, was conducted on foot, as this was in keeping with National Park regulations concerning wilderness zones. This expedition was based in the Kilola Valley (07°42'S, 34°02'E) for three weeks. A base camp was made at the foot of the escarpment and all equipment was ferried using seven porters over a period of four days. The escarpment face is extremely steep and made carrying of heavy loads difficult. During all four of the expeditions to the area extensive mist-netting was undertaken and field observations made.

Results

The following species recorded in the Isunkaviola Hills represent some geographical extensions to range and locality extensions to previous records.

Schalow's Turaco *Tauraco schalowi*. 6 November 2003 (07°48'S, 033°52'E, altitude 1677 m) and 10 November 2003 (07°45'S, 34°01'E, altitude 1812 m). In these localities the density was outstanding. This species was feeding on fruiting trees and drinking at forest-covered pools in the mornings. At the lower site Violet-crested Turaco *Tauraco porphyreolophus* was also present where they freely mixed whilst feeding with *T. schalowi*.

Racket-tailed Roller *Coracias spatulata*. All birds of this species in Ruaha National Park have entirely blue underparts and not, as stated in Stevenson & Fanshawe (2002), purplish throats like Lilac-breasted Roller *C. caudata*.

Black-backed Barbet *Lybius minor*. This bird is common throughout Isunkaviola and several were mist-netted at different sites, a number of these being in the Kilola Valley (07°42'S, 34°02'E, altitude 1730 m). These records represent a significant eastern extension of the known range (Fry *et al.* 1988). They were often seen feeding together with Whytes Barbet *Stactolaema whyttii*.

African Broadbill *Smithornis capensis*. This species is common throughout the Isunkaviola Hills in all localities visited. It inhabits a variety of altitudes but is dependant on forest or forested stream courses. An extremely high density was noted, with males displaying as little as 60 m apart.

Pearl-breasted swallow *Hirundo dimibiata*. Five birds were mist-netted whilst coming to drink at a small open pool in grassland on 20 November 2002 (07°44'S, 34°02'E). Subsequently, in September 2004 a small flock was observed on several occasions and were also seen, whilst perched in a marshy area, to be involved in breeding displays of mouth opening and fluttering (07°42'S, 34°02'E). Hitherto this species was known in Tanzania by only one record from Mbeya. Given the month and locality this could indicate a new breeding area.

African Hill Babbler *Pseudoalcippe abyssinica*. 10 November 2003 (07°45'S, 34°01'E, altitude 1812 m). These birds were mist-netted and observed in *Drypetes* forest. Notably, these birds were of the nominate race as opposed to the race *P. a. stierlingi* (Fry & Keith 2000) found in the Mufindi Highlands of the Eastern Arc, 165 km to the southeast of the Isunkaviola Hills.

Leaflove *Phyllastrephus scandens*. One in November 2002 (07°04'S, 34°01'E, altitude 1812 m). This bird was mist-netted in mature *Drypetes* forest. This species was also observed in the Kilola Valley (07°42'S, 34°02'E, altitude 1730 m) in September 2004. This record indicates a new locality extension and also a good forest indicator.

White-headed Black Chat *Myrmecocichla arnotti*. During our expedition of October 2002 SS noticed that females of this species were dramatically different from the norm with a white upper breast extending to the cheeks and throat and forming a complete white collar. The black of the head extended from the lores through the eye to the occiput, as opposed to only the white throat. During the expedition of November 2003 further observations were made (07°48'S, 33°52'E, altitude 1677 m). Several pairs were found over a large area, and all were either on eggs, or were feeding young in and out of nest-holes in trees. To date 40 pairs have been recorded and all birds seen in western Ruaha National Park conform to the same pattern as described (Keith *et al.* 1992). One female was collected and material sent for DNA analysis.

The 40 pairs of this form have been observed over an area 73 x 70 km and the same bird has been seen in Katavi National Park some 450 km to the west. The birds in Katavi were photographed by R. Field on 30 September 2004.

We suspect that these birds may represent a new subspecies and that previous records in and to the west of Ruaha National Park could involve the same form but have been overlooked on account of the males being more prominent to observers. Further material is being collected in separate localities.

In observing plumage development in males of this species, we also noted an unrecorded transition in plumage development. Young males were initially all black but developed white eyebrows first, before the black crown slowly changed and became the typical white cap (Keith *et al.* 1992).

White-eyed Slaty Flycatcher *Melaenornis fischeri*. 10 November 2003 (07°45'S, 34°01'E, altitude 1812 m). This species was plentiful in the area and several pairs were noted feeding young out of the nest. One adult female and one juvenile were netted at forest edge and close to a fragmented thicket. This represents a locality extension and a good forest indicator.

African Dusky Flycatcher *Muscicapa adusta*. 10 November 2003 (07°45'S, 34°01'E, altitude 1812 m). This species was plentiful at this location and birds were inhabiting forest and forest edge. Both nest building and feeding of young out of the nest were observed. Adults and young were mist-netted. This species is also common in the Kilola Valley. These records are an extension of the range in the locality and a forest indicator.

White-tailed Crested Flycatcher *Trochocercus albonotatus*. These birds were observed in a forested gully on 3 October 2001 (07°48'S, 33°58'E, altitude 1700 m). This represents a locality extension and a good forest indicator.

Blue-mantled Crested Flycatcher *Trochocercus cyanomelas*. 6 November 2003 (07°48'S, 33°53'E, altitude 1677 m). In an area of open mixed tree cover and close to the eastern, upper headwater forested tributary of the Mzombe river. Four of these birds were observed together at length as they were involved in aggressive, territorial behaviour. This record represents an eastern extension of the race *T. c. viviax* (Urban *et al.* 1997).

Western Violet-backed Sunbird *Anthreptes longuemarei*. 7 November 2003 (07°48S, 33°53'E, altitude 1766 m) and September 2004 (07°42'S, 34°02'E) breeding. Whilst this species is recorded in southern Tanzania, it is of interest to note that the altitude and vegetational differences in the Isunkaviola Hills represent the divide in Ruaha between this and Eastern Violet-backed Sunbird *A. orientalis*, which is present in the low-altitude drier areas of Ruaha National Park (Fry & Keith 2000).

Eastern Double-collared Sunbird *Cinnyris mediocris*. 10 November 2003 (07°45'S, 34°01'E, altitude 1812 m) and September 2004 (07°42'S, 34°02'E, altitude 1730 m). In mixed open vegetation, between old *Brachystegia* woodland and *Drypetes* forest. Whilst these sightings are an extension to known range, we suspect that these are part of relict forest populations which have been overlooked (N. Baker and R. Bowie, pers. comm.)

Variable Sunbird *Cinnyris venusta*. September 2004 (07°42'S, 34°02'E, altitude 1730 m). During observations SS noticed a prominent blue colour to the backs of males, as opposed to the normal green sheen. All males also had a strong orange wash on the breast and rich orange pectoral tufts. R. Bowie (pers. comm.) has also seen this plumage difference in birds of the Ngorongoro Crater highlands in the north of Tanzania. Although this difference has already been noted in these two highland habitats, other situations may have been overlooked and require further study.

Eastern Olive Sunbird *Cyanomitra olivacea*. 5–8 November and 10–14 November 2003 (07°48'S, 33°52'E, altitude 1677 m; 07°45'S, 34°01'E) and September 2004 (07°42'S, 34°02'E, altitude 1730 m). In view of the large extension to the known range of this species, its presence in the area is again, in our opinion, an indication of the relict links to the Mbeya/Chunya Highlands and the Kigome Hills. In all birds mist-netted (82 in the Kilola Valley alone) both sexes had yellow pectoral tufts. One male had both a yellow throat and yellow pectoral tufts (Fry & Keith 2000).

Southern Citril *Serinus hypostictus*. This species was mist-netted throughout our Isunkaviola Hills locations and is not uncommon. These records represent an interesting extension to known range and form a part of a relict population hitherto not recorded (Fry & Keith 2004, N. Baker pers. comm.).

Discussion

These records from the Isunkaviola Hills indicate an important geographical location with links north, south, east and west which requires much more study. Two species of weaver in the area have remained unidentified at present and work continues to resolve this dilemma. The low-lying rift area which forms much of Ruaha and extends to the Usangu catchment creates the divide between Isunkaviola and the Eastern Arc highlands. Upon recent inspection of satellite imagery, it appears that the eastern and southern relict link to Isunkaviola may well be through the Mbeya/Chunya highlands. Unfortunately however, the area is also well used by poachers, not as a base to hunt from, but as an access route to other areas of the park and to Rungwe Game Reserve outside the park. In order for these poachers to make easier access routes for themselves they light many fires which continue to be very destructive to the remaining forest sectors and much damage is evident. This is critical as the remaining stands of these relict forest areas are being eroded. Due to its ecological status, this area has become a focus of conservation efforts. Ruaha National Park, under the leadership of MM (Chief Park Warden), is intensifying efforts to conserve this unique area. A management program for Isunkaviola developed by Ruaha National Park has begun. An access track, which was completed in December 2004, is now in use. This track was carefully designed to use the existing park boundary. A temporary ranger post, called Kimbi, has also just

been installed along this route and regular foot patrols are now taking place to help protect this delicate and special area.

References

- Fry, C.H., Keith, S. & Urban, E.K. (eds) 1999. *The birds of Africa* Vol. III. London: Academic Press.
- Fry, C.H. & Keith, S. (eds) 2000. *The birds of Africa* Vol. VI. London: Academic Press.
- Fry, C.H. & Keith, S. (eds) 2004. *The birds of Africa* Vol. VII. London: Academic Press.
- Keith, S., Urban, E.K. & Fry, C.H. (eds) 1992. *The birds of Africa* Vol. IV. London: Academic Press.
- Stevenson, T. & Fanshawe, J. 2002. *Field guide to the birds of East Africa*. London: T. & A.D. Poyser.
- Urban, E.K., Fry, C.H. & Keith, S. (eds) 1997. *The birds of Africa* Vol. V. London: Academic Press.

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